



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/756,168	01/13/2004	Gunter Hintenlang	8470G-000004	2113
27572	7590	09/23/2005	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			PATEL, VISHAL A	
			ART UNIT	PAPER NUMBER
			3673	

DATE MAILED: 09/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/756,168

Applicant(s)

HINTENLANG ET AL.

Examiner

Vishal Patel

Art Unit

3673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6-8,10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-8,10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date, _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination

1. A request for continued examination under 37 CFR 1.114, was filed in this application after final rejection. Applicant's submission filed on 8/1/05 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 6-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatch (US. 6,367,810) in view of Nagasawa (US. 4,623,153) and further in view of GB 1,299,685.

Hatch discloses a sealing ring comprising a support ring having an L-shape with a radial leg and an axial leg, a first sealing lip (71) made of an elastomeric material, a second sealing lip (59) made of a polymeric material, the elastomeric material of the first sealing lip completely enveloping the radial leg of the support ring (elastomeric material 71, 68 and portion of material above 62 in phantom line that surrounds the radial leg as showed in figure 2), the second lip being disposed between the radial leg of the support ring and a clamping plate (plate having 65 and 66), the clamping plate acts as a centering ring for precentered installation of a machine element (shaft having surface 56), the second sealing lip acts as a second centering ring (the second sealing lip acts as a second centering ring) for further precentered installation of the machine element and is located after the first centering ring in the installation direction and the

Art Unit: 3673

second sealing lip acting as a preliminary seal for the first sealing lip (the second sealing lip acts as a primary seal for the first sealing lip). The second sealing lip is made of PTFE and is precurved in the installation direction and axially in the direction of the first sealing lip. The support ring is surrounded on its outer periphery by a statically loaded seal (seal formed by the phantom lines on 62). The static seal is made of an elastomeric material. The static seal forms a single piece with the first sealing lip. The clamping ring is pressed into the second axial leg of the support ring with its radially axial leg (65 is pressed into 62).

Hatch discloses the invention substantially as claimed above but fails to disclose that the first centering ring has a C-shape having an axially open end in the direction opposite of that of installation, an inner portion of the C-shape is inclined having a diameter that increases in funnel like fashion axially in the direction to the installation direction (the installation direction is from the left of figure 2 to the right of figure 2), the first sealing lip is precurved axially in the installation direction and in the direction of a space to be sealed and the support ring having a T-shape. Nagasawa teaches to have a support ring that is an L-shape (7) that is completely enveloped by an elastomeric lip (lip 1) or a U-shape support ring (6) or a support ring that is a T-shape (6') that is enveloped by an elastomeric material (material of lip 1) and the elastomeric lip to be precurved (as seen in figure 7). It would have been obvious to one having ordinary skill in the art at the time the invention was made to configure the elastomeric lip and the support ring of Hatch to be precurved and to have the support ring to be a T-shape, respectively as taught by Nagasawa, to provide a L-shape or T-shape support ring is considered to be art equivalent and to provide better sealing.

Hatch and Nagasawa disclose the invention substantially as claimed above but fail to disclose that the first centering ring having an inner leg (inner leg of the C-shape) that is inclined to have a diameter that increases in funnel like fashion. GB '685 teaches to have a centering ring having an inner leg that is inclined to have a diameter that increases in funnel like fashion (7' or 9 or 7"). It would have been obvious to one having ordinary skill in the art at the time the invention was made to configure the first centering ring of Hatch and Nagasawa to have the inner leg that is inclined to have a diameter that increase in funnel like fashion as taught by GB '685, to prevent damage caused by any eccentricity of the shaft relative to its support during the assembly of the seal (Page 1, lines 49-51 of GB '685).

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hatch, Nagasawa and GB '685.

Hatch, Nagasawa and GB '685 disclose the claimed invention except for the claiming ring being made of spring steel. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the clamping ring of Hatch, Nagasawa and GB '685 to be formed of spring steel, since it has been held to be within the general skill of a worker in the art to select a know material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Response to Arguments

5. Applicant's arguments filed 8/1/05 have been fully considered but they are not persuasive.

Applicants' argument that neither GB '685 or Nagasawa teach a T-shape support ring having a radial leg, a first leg extending in a first direction with respect to the radial leg and a

Art Unit: 3673

second leg extending in an opposite direction than the first direction is not persuasive because as noted above that Nagasawa teaches this feature, figures 3-4, where a T-shape support ring having a radial leg (7a), a first leg (6c) that extends in one direction with respect to the radial leg and a second leg 6a' that extends in an opposite direction with respect to the first direction.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vishal Patel whose telephone number is 571-272-7060. The examiner can normally be reached on 6:30am to 8:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather C. Shackelford can be reached on 571-272-7049. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VP
September 16, 2005

A handwritten signature in black ink, appearing to read 'Vishal Patel', with a stylized flourish at the end.

Vishal Patel
Patent Examiner
Tech. Center 3600